

**CONSERVATION STEWARDSHIP PROGRAM (CStP)
CONSERVATION ACTIVITY & EVALUATION TOOL (CAET) GUIDANCE
NATURAL RESOURCES CONSERVATION SERVICE (NRCS)**

Fiscal Year 2017-1 Crop Annual/Mixed	
Soil Erosion	
Sheet and Rill Erosion	
Use Planning Criteria. An evaluation test question will be listed, but DO NOT answer it for this micro-resource concern. The current erosion prediction technology will be used to calculate sheet and rill erosion. Use the dominant critical soil to calculate this. The soil component for water erosion is the one greater than 10% of the area of interest (AOI) with the highest K (erodibility) factor. Erosion prediction models will be ran on the dominant critical soil of the worst field.	
Wind Erosion	
Use Planning Criteria. An evaluation test question will be listed, but DO NOT answer it for this micro-resource concern. The current erosion prediction technology will be used to calculate wind erosion. Use the dominant critical soil to calculate this. The soil component for wind erosion is the one greater than 10% of the AOI with the greatest sand percentage. Erosion prediction models will be ran on the dominant critical soil of the worst field.	
Ephemeral Gully Erosion	
Use Planning Criteria. An evaluation test question will be listed, but DO NOT answer it for this micro-resource concern. Field observation will be used to determine if ephemeral gullies are present or not.	
Classic Gully Erosion	
Use Planning Criteria. An evaluation test question will be listed, but DO NOT answer it for this micro-resource concern. Classic gully erosion generally occurs in well-defined drainage ways and generally is not obliterated by tillage. In some situations, headcuts are present and aid in advancing the gully upstream. Field observation will be used to determine if classic gullies are present or not.	
Soil Quality Degradation	
Organic Matter Depletion	
Use Planning Criteria. An evaluation test question will be listed, but DO NOT answer it for this micro-resource concern. Use Kansas Agronomy Technical Note KS-43 Organic Matter Matrix. https://www.nrcs.usda.gov/wps/portal/nrcs/detail/ks/people/employees/?cid=nrcs142p2_033420 . The organic matter matrix will need to be followed to meet this micro-resource concern.	
Compaction	
Use Planning Criteria. An evaluation test question will be listed, but DO NOT answer it for this micro-resource concern. Observation of soil and/or plant condition will be used to determine if a compaction issue exists.	
Concentration of Salts and other Chemicals	
Use Planning Criteria. An evaluation test question will be listed, but DO NOT answer it for this micro-resource concern.	

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Excess Water

Runoff, Flooding, and Ponding

Use Evaluation Test question: Excessive water runoff, flooding, and water ponding are not concerns; or measures are applied such as grassed waterways, terraces, diversions, filter strips to reduce excessive runoff; or if flooding is a concern, crops and field activities are managed within the seasonal flooding periods; or where ponding is a concern, land leveling or shallow surface drains prevent ponding of water that limits crop production. All natural intermittent streams and wetlands farmed under normal conditions will be excluded from this.

Insufficient Water

Inefficient Use of Irrigation Water

Use Evaluation Test question: An irrigation water management plan is followed that meets the crop's needs, while maximizing irrigation water efficiency, schedules water application based on soil moisture monitoring and/or evapotranspiration monitoring, measures and records the amount of water you use to irrigate as it comes onto the farm and goes to each field, AND the system's distribution uniformity has been evaluated and necessary changes were made. If crops are NOT irrigated, mark "N/A" to the Evaluation Test Met. The producer must have the following to meet this micro-resource concern if the ground is irrigated: 1.) An irrigation water management plan, 2.) Soil moisture probes or evapotranspiration (ET) based scheduling program, 3.) Water meter on the water source, and 4.) System uniformity would have to be documented by the center pivot sprinkler nozzle design package or subsurface drip irrigation engineering design. Flood irrigation, volume gun sprinkler, and/or solid set sprinkler irrigation uniformity would need to be analyzed by NRCS on a case by case basis.

Inefficient Moisture Management

Use Evaluation Test question: Crops grown, varieties, and cropping order are carefully chosen. The local climate conditions and a water balance/budget are used in the decision making process. Crop rotation includes at least 2 crops in rotation. Fallow is not a crop. This is applicable to both dryland and irrigated management systems.

Water Quality Degradation

Pesticides in Surface Water

Use Planning Criteria. An evaluation test question will be listed, but DO NOT answer it for this micro-resource concern.

Pesticides in Ground Water

Use Planning Criteria. An evaluation test question will be listed, but DO NOT answer it for this micro-resource concern.

Nutrients in Surface Water

Use Planning Criteria. An evaluation test question will be listed, but DO NOT answer it for this micro-resource concern. A current soil test will be anything less than 5 years.

Nutrients in Ground Water

Use Planning Criteria. An evaluation test question will be listed, but DO NOT answer it for this micro-resource concern. A current soil test will be anything less than 5 years.

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Salts in Surface Water
Use Planning Criteria. An evaluation test question will be listed, but DO NOT answer it for this micro-resource concern.
Salts in Ground Water
Use Planning Criteria. An evaluation test question will be listed, but DO NOT answer it for this micro-resource concern.
Excess Pathogens and Chemicals from Manure, Bio-solids, or Compost Applications in Surface Water.
Use Evaluation Test questions: 1.) Manure and other biosolids are applied using a nutrient budget to determine all application rates, including: realistic yield goals, nutrient uptake requirements, and available nutrient accounting for each of the following: (a) N, P, K from representative soil test (≤ 3 yrs), (b) Soil organic matter mineralization, (c) Legumes in rotation, (d) Avoiding manure applications when soils are frozen, snow covered, or saturated, (e) Planned post-harvest residual soil test levels, (f) Available nutrient analysis for each nutrient source, and (g) Available nutrient uptake efficiencies from planned application rate, source, method, timing, and placement. All state specific application setbacks are maintained for all nutrient applications. Minimum setbacks are maintained from drainageways, wells, ditches, streams, rivers, and water bodies. Only land applied application of manure will be considered for this question. If producer is not applying manure or biosolids, answer this question "N/A". 2.) Filter strips that are at least 30 feet wide are established and maintained. If filter strips are not present, answer this question "N/A".
Excess Pathogens and Chemicals from Manure, Bio-solids, or Compost Applications in Ground Water.
Use Evaluation Test question: Manure and other biosolids are applied using a nutrient budget to determine all application rates, including: realistic yield goals, nutrient uptake requirements, and available nutrient accounting for each of the following: (a) N, P, K from representative soil test (≤ 3 yrs), (b) Soil organic matter mineralization, (c) Legumes in rotation, (d) Avoiding manure applications when soils are frozen, snow covered, or saturated, (e) Planned post-harvest residual soil test levels, (f) Available nutrient analysis for each nutrient source, and (g) Available nutrient uptake efficiencies from planned application rate, source, method, timing, and placement. All state specific application setbacks are maintained for all nutrient applications. Minimum setbacks are maintained from drainageways, wells, ditches, streams, rivers, and water bodies. Only land applied application of manure will be considered for this question. If producer is not applying manure or biosolids, answer this question "N/A".
Petroleum, Heavy Metal, and Other Pollutants Transported to Surface Water
Use Planning Criteria. An evaluation test question will be listed, but DO NOT answer it for this micro-resource concern. The fuel storage area and tank must be located a minimum of 100 feet from any river, stream, ditch, pond, lake, sinkhole, wetland, or water well. Any tank over 660 gallons must be double-walled or have a secondary containment system.
Petroleum, Heavy Metal, and Other Pollutants Transported to Ground Water
Use Planning Criteria. An evaluation test question will be listed, but DO NOT answer it for this micro-resource concern. The fuel storage area and tank must be located a minimum of 100 feet from any river, stream, ditch, pond, lake, sinkhole, wetland, or water well. Any tank over 660 gallons must be double-walled or have a secondary containment system.

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Excessive Sediment in Surface Water
<p>Use Planning Criteria. An evaluation test question will be listed, but DO NOT answer it for this micro-resource concern. Streams may be identified by a defined bed and bank, or other resources available to assist the planner in making that determination (USGS topographic maps, Hydrography map, etc.). SVAP 2.0 will be used to assess stream conditions for wade-able streams. Adjacent is less than 100 feet.</p> <p>https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_042678.pdf</p>
Air Quality Impacts
Emissions of Particulate Matter (PM) and PM Precursors
<p>Use Evaluation Test question: Multi-operation field tools, precision guidance systems, or other dust reducing tools are used to lessen particulate discharges. The following criteria will be used to determine if this evaluation test question is met. Crop interval soil tillage intensity rating (STIR) shall be no greater than 20. Crop interval is defined as the interval between harvest or termination of the previous cash crop and harvest or termination of the current cash crop (includes fallow periods).</p>
Emissions of Ozone Precursors
<p>Use Evaluation Test question: Ozone precursor producing activities are minimized by using one or more of the following activities: reducing combustible engines exhaust via TIER 4 engine, applying integrated pest management (IPM) principles for pesticide applications, injection or incorporation of manure, nitrogen fertilizer incorporation, or use of a nitrogen stabilizer.</p> <p>https://www.empire-cat.com/uploadedFiles/Empire_Cat/Power_Systems/Emissions_Solutions/Empire_Tier4Mlr.pdf</p>
Emission of Greenhouse Gases (GHGs)
<p>Use Evaluation Test question: If nitrogen is applied, nitrogen is applied as close to possible to crop uptake needs at the recommended rates. Nitrogen needs to be applied no more than 30 days before the planned planting date.</p>
Objectionable Odors
<p>Use Evaluation Test question: Manure is applied and immediately incorporated or applied when wind direction is away from human occupied areas. If manure is not applied, answer this question "N/A".</p>
Degraded Plant Condition
Undesirable Plant Productivity and Health
<p>Use Evaluation Test question: Plants and crops are adapted to the soil and site conditions and produce average yield levels for the county in typical years. Use county average yield from Farm Service Agency or crop insurance actual production history.</p>
Excessive Plant Pest Pressure
<p>Use Evaluation Test questions: 1.) Weeds, insects, and diseases do not limit crop production. 2.) A crop rotation of at least 2 crops (which may include cover crops) that reduces plant pest pressures and breaks pest cycles is used. For example, crop rotation breaks pest cycles and allows for the rotation of chemical modes of action. Fallow is NOT considered a crop.</p>

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Fish and Wildlife – Inadequate Habitat

Inadequate Habitat - Food

Use Evaluation Test questions: 1.) Unharvested grain crops are intentionally left in the fields as wildlife food on an annual basis. 2.) Plant growth and cover is managed to develop and maintain early successional habitat to help chosen wildlife species. The Kansas State Wildlife Action Plan lists the species of greatest conservation need by ecoregion. The chosen declining species in Kansas for CStP are the Greater Prairie-Chicken, Lesser Prairie-Chicken, and Northern Bobwhite. The producer must have implemented a wildlife habitat management plan. If the plan was developed by someone other than NRCS, the producer must bring it in to show us.

Inadequate Habitat – Cover/Shelter

Use Evaluation Test questions: 1.) A crop rotation that provides cover and shelter for wildlife is used. Crop rotations that include grain sorghum, forage sorghum, corn, or wheat will meet this requirement. 2.) Plant growth and cover is managed to develop and maintain habitat to help chosen wildlife species. The Kansas State Wildlife Action Plan lists the species of greatest conservation need by ecoregion. The chosen declining species in Kansas for CStP are the Greater Prairie-Chicken, Lesser Prairie-Chicken, and Northern Bobwhite. The producer must have implemented a wildlife habitat management plan. If the plan was developed by someone other than NRCS, the producer must bring it in to show us.

Inadequate Habitat – Water

Use Evaluation Test question: Changes to water flow for irrigation or otherwise are limited to not alter the stream's usual flow. If crops are NOT irrigated, answer test question "N/A".

Inadequate Habitat – Habitat Continuity (Space)

Use Evaluation Test question: Connectivity between food resources, cover, and shelter is provided for the chosen wildlife species. The Kansas State Wildlife Action Plan lists the species of greatest conservation need by ecoregion. The chosen declining species in Kansas for CStP are the Greater Prairie-Chicken, Lesser Prairie-Chicken, and Northern Bobwhite. Review Kansas Biology Technical Note KS-33 [FOTG, Section IV, Conservation Practices, Upland Wildlife Habitat Management (645), Fact Sheet] for habitat requirements.

Inefficient Energy Use

Equipment and Facilities

Use Evaluation Test question: Recommendations/components of an energy audit have been applied. The audit addressed equipment and facilities on the farm. For example, energy loss from lighting, drying, refrigeration, heating, or building insulation have been improved. All recommendations/components need to be applied. If an audit has not been completed, answer this question "NO".

Farming/Ranching Practices and Field Operations

Use Evaluation Test question: Recommendations/components of an energy audit have been applied. The audit addressed field operations on the farm. For example, energy loss from driven equipment, irrigation, or pumping have been improved. All recommendations/components need to be applied. If an audit has not been completed, answer this question "NO".